SONY®

KV20TS30

3-750-270-21 (1)

TRINITRON® COLOR TV

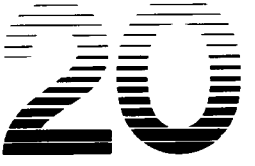
Operating Instructions

Before operating the unit, please read this manual thoroughly and retain it for future reference.

Owner's Record

The model and serial numbers are located at the rear of the unit. Record these numbers in the spaces provided below. Refer to these numbers whenever you call upon your Sony dealer regarding this product.

Model No. _____ Serial No. _____



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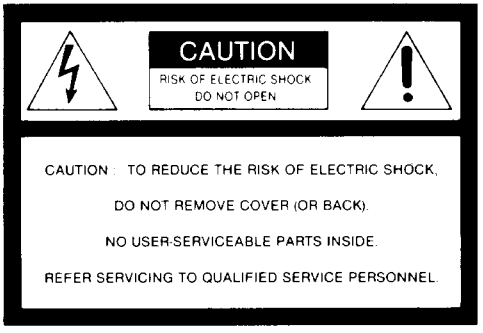
WARNING

To prevent fire or shock hazard, do not expose the unit to rain or moisture.


CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN
CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK,
DO NOT REMOVE COVER (OR BACK).
NO USER-SERVICEABLE PARTS INSIDE.
REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

This symbol is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

This symbol is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

Note to CATV system installer in the U.S.A.
This reminder is provided to call the CATV system installer's attention to Article 820-22 of the NEC that provides guidelines for proper grounding and, in particular, specifies that the cable ground shall be connected to the grounding system of the building, as close to the point of cable entry as practical.

CAUTION:

TO PREVENT ELECTRIC SHOCK, DO NOT USE THIS POLARIZED AC PLUG WITH AN EXTENSION CORD, RECEPTACLE OR OTHER OUTLET UNLESS THE BLADES CAN BE FULLY INSERTED TO PREVENT BLADE EXPOSURE.

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General

Specifications ..... back cover
Troubleshooting ..... back cover

Features

Color monitor featuring a Microblack™ Trinitron picture tube for high resolution, high contrast picture.

- **Multi-band VHF/UHF/CATV tuner** receives up to 125 cable channels for a total of 181 possible off-air and cable channels.
- **Built-in MTS (Multichannel TV Sound) decoder** enables reception of stereo programs and Second Audio Program (SAP) broadcasts.
- **S VIDEO INPUT jack** which is connected to the S video output jack on the VCR allows superior playback pictures.
- **Built-in video input jacks** for better quality picture of the connected VCR or other equipment.
- **Variable audio output jacks** reproduces TV or video sound through an audio system.
- **On-screen displays**

Supplied Remote Commander provides you many other convenient features.

- **The unicommander allows you to operate both TV and Sony VCR from a distance.**
- **Timer/Block** for automatic program starting and channel blocking.
- **Sleep timer** automatically turns off the TV after approximately one hour.
- **Automatic programming** to preset all receivable channels instantly.
- **Jump button** to switch quickly between two channels.

And other features for high quality picture...

- **Dynamic color™ system** for superior color reproduction with natural facial color tones and dazzling whites.
- **Dynamic picture™ system** adjusts picture contrast automatically to produce more detail in both bright and dark areas of every scene.
- **Colorpure Filter™** produces fine picture detail without color spill or color noise.

Precautions

Safety

- Operate the unit only on 120 V AC.
- One blade of the plug is wider than the other for the purpose of safety and will fit into the power outlet only one way. If you are unable to insert the plug fully into the outlet, contact your dealer.
- Should any liquid or solid object fall into the cabinet, unplug the unit and have it checked by qualified personnel before operating it any further.
- Unplug the unit from the wall outlet if it is not going to be used for several days or more. To disconnect the cord, pull it out by the plug. Never pull the cord itself.

Installation

- To prevent internal heat build-up, do not block the ventilation openings.
- Do not install the unit in a hot or humid place or in a place subject to excessive dust or mechanical vibration.

Cleaning

Clean the unit with a slightly damp soft cloth. Use a mild household detergent. Never use strong solvents such as thinner or benzine as they might damage the finish of the cabinet.

Repacking

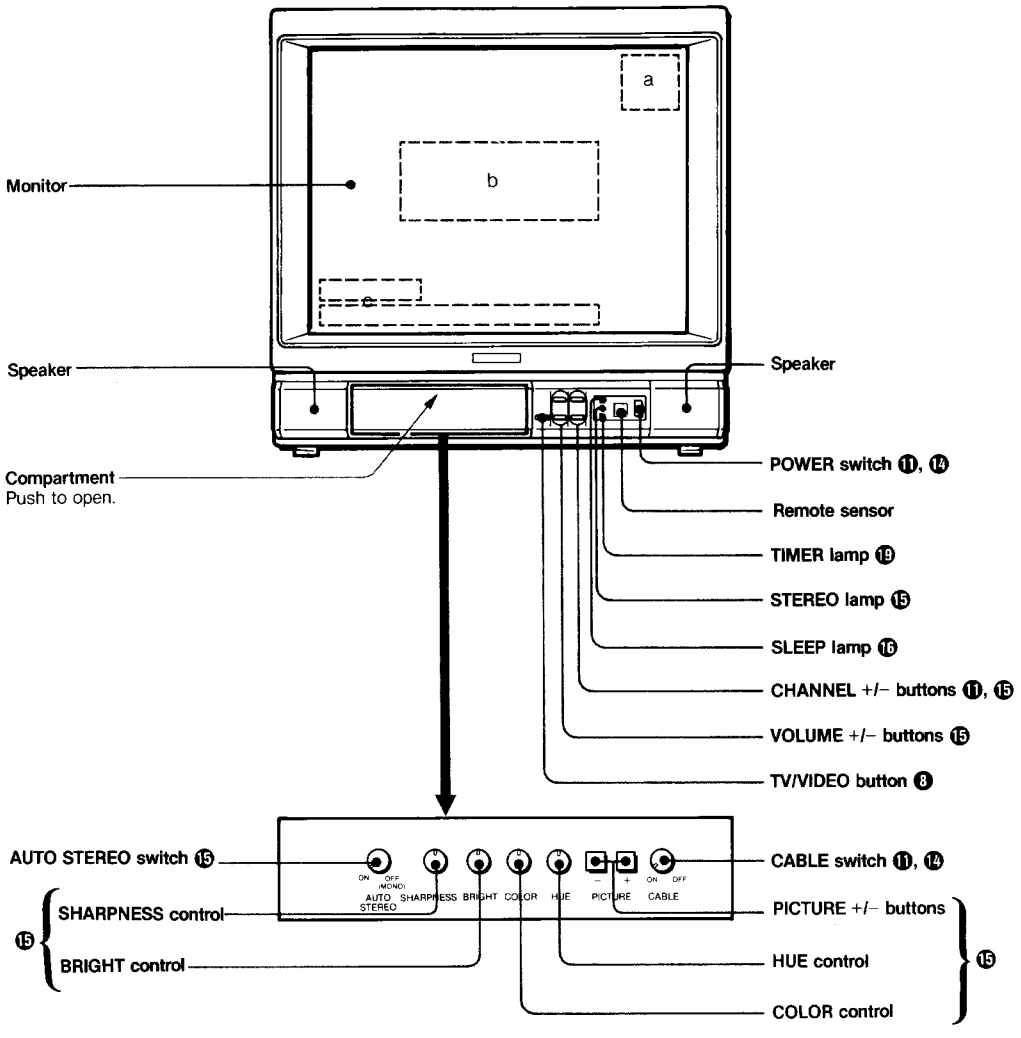
Retain the original carton and packing materials for safe transport of this unit in the future.

Use of this television receiver for other than private viewing of programs broadcast on UHF or VHF or transmitted by cable companies for the use of the general public may require authorization from the broadcaster/cable company and/or program owner.

Location of Controls

Refer to the page indicated in ● for details.

Front



On-screen displays

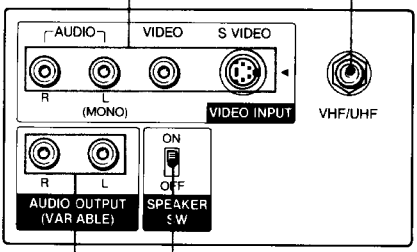
a) • Channel numbers
- MTS mode indication
- "MUTING", "SLEEP" or "VIDEO" mode indication

b) "AUTO PROGRAM", "TIMER" or "TIMER BLOCK" indication

c) • Bar display for volume or picture adjustment
- Current time for Timer/Block.

Rear

VIDEO INPUT jacks ❽, ❾
S VIDEO input jack
(4-pin mini DIN)
VIDEO input jack
(phono jack)
AUDIO input jacks
(phono jacks)



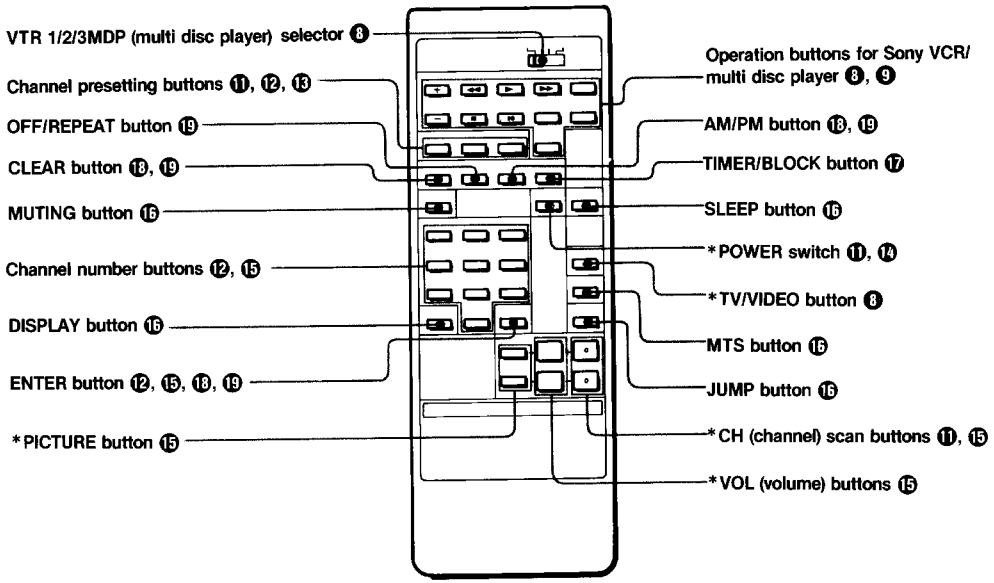
VHF/UHF antenna terminal ❽, ❾

AUDIO OUTPUT (VARIABLE) jacks ❿
(phono jacks)

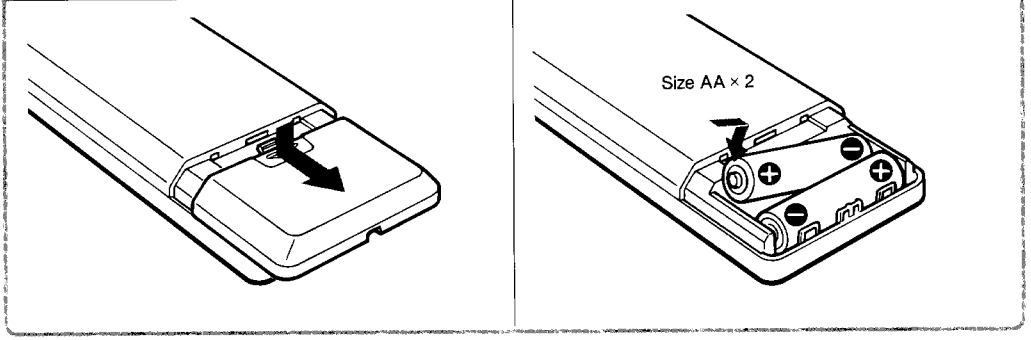
SPEAKER SW (switch) ❿

Remote Commander RM-764

Refer to the pages indicated in ● for details.
The buttons with * mark have the same function as the buttons with the same or similar mark on the TV.


VTR 1/2/3MDP (multi disc player) selector ❽
Channel presetting buttons ⓫, ⓬, ⓭
OFF/REPEAT button ⓳
CLEAR button ⓲, ⓳
MUTING button ⓰
Channel number buttons ⓬, ⓯
DISPLAY button ⓰
ENTER button ⓬, ⓯, ⓲, ⓳
*PICTURE button ⓯
Operation buttons for Sony VCR/ multi disc player ❽, ❾
AM/PM button ⓲, ⓳
TIMER/BLOCK button ⓱
SLEEP button ⓰
*POWER switch ⓫, ⓮
*TV/VIDEO button ❽
MTS button ⓯
JUMP button ⓯
*CH (channel) scan buttons ⓫, ⓯
*VOL (volume) buttons ⓯

Installing Batteries



Notes

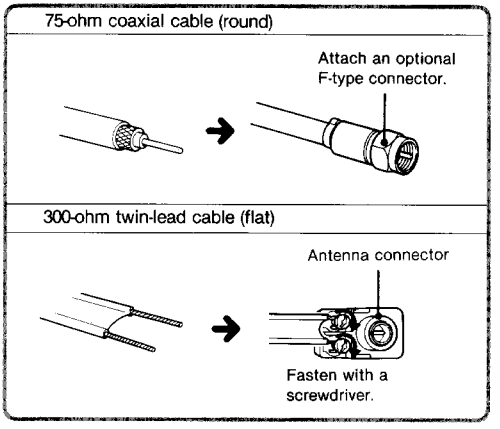
- In normal operation, batteries will last up to half a year. If the unit does not operate properly, the batteries might be exhausted. Replace them with new ones.
- **To avoid damage from possible battery leakage** Remove the batteries when the Commander will not be used for a long time.
- If a Remote Commander that is not recommended is used to operate this TV, or if the supplied Remote Commander is used to operate another TV, the TV may not operate properly.
- Operable range is limited. The shorter the distance between the Commander and TV, the wider the angle within which the Commander can control the TV.

Connecting TV Antenna/Cable

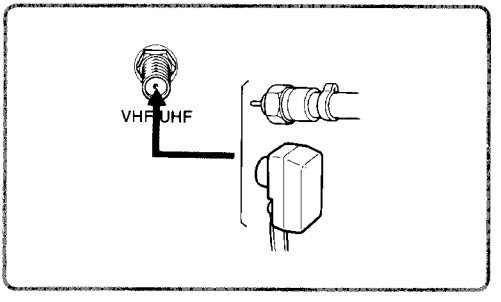
If you cannot obtain satisfactory reception with an indoor antenna, use an outdoor antenna.
Cable TV reception is only possible by connecting a cable supplied by your local cable operator.

To Connect a VHF, UHF, or VHF/UHF Combination Antenna* or CATV Cable

1 Check the cable type and prepare the cable end using the appropriate connector.

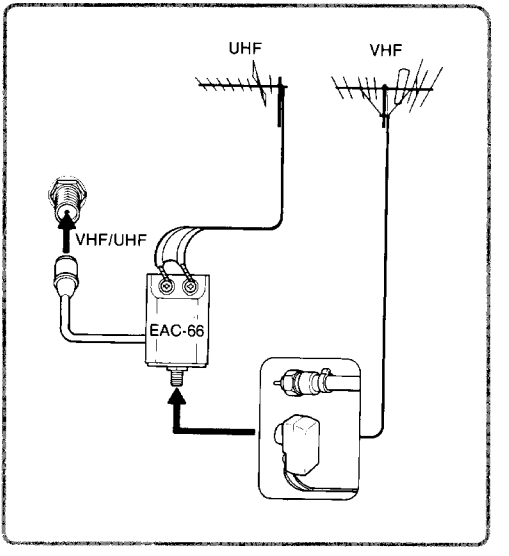


2 Plug the connector into VHF/UHF on the rear of the TV.



When you connect both VHF and UHF antennas
Use the optional EAC-66 U/V mixer.

1 Prepare the VHF antenna end using the appropriate connector.
2 Connect the cables to the mixer.
3 Plug the mixer to VHF/UHF.



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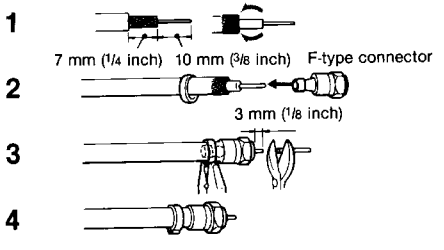
* Most combination antennas are equipped with a signal splitter. Remove the splitter and attach the appropriate connector.

How to attach an F-type connector to the 75-ohm coaxial cable



When the U/V mixer is used
Snow and noise may appear in the pictures of the cable TV channels over 37 (W+1).

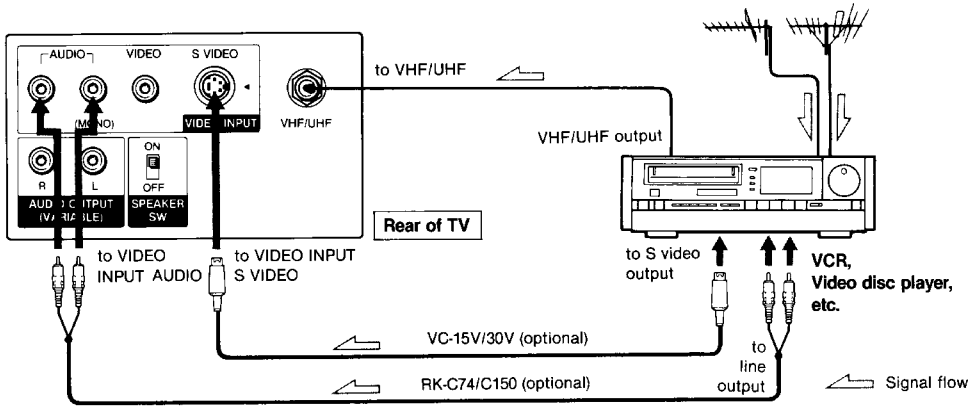
Connecting Other Optional Equipment

Connecting a VCR

With this connection, you will be able to...

— View the playback of video tapes
— Record TV programs
— Record a TV program while viewing another

1 Connecting a VCR/Video disc player with an S video output jack



Preparations

1 Turn on the TV.
2 Press the TV/VIDEO button on the TV or on the commander so that the "VIDEO" indication appears on the screen.

For operation, refer to the instruction manual furnished with the VCR.

To return to the TV mode

Press the TV/VIDEO button on the TV or on the commander so that a channel number appears on the screen.

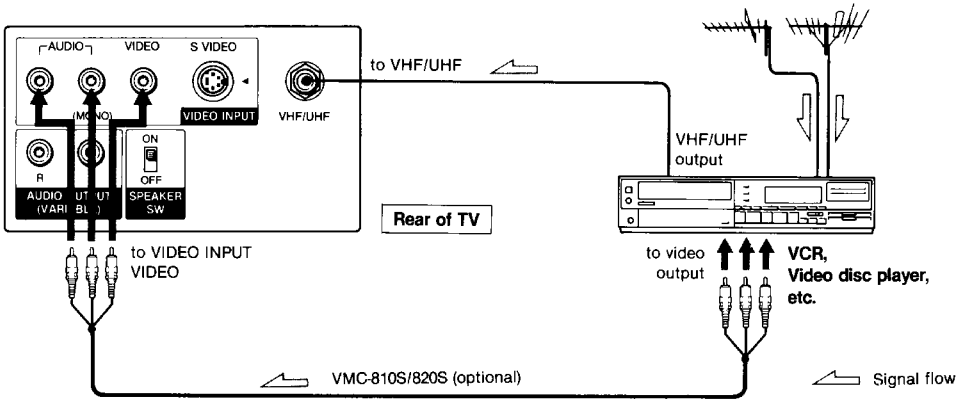
When using a Sony infrared remote control VCR

The VCR can be operated with the supplied Remote Commander.

1 Set the VTR1/2/3MDP selector to the desired position according to the equipment to be operated.
   VTR1: Sony Betamax VCR
   VTR2: Sony 8mm VCR
   VTR3: Sony VHS VCR
   MDP: Multi disc player/video disc player
2 Press a VCR/multi disc player operation button on the commander.

- When connecting a TV and a video disc player: There is no need to connect the antenna and the VHF/UHF terminals between them.
- If you connect a monaural VCR, connect the audio output of the VCR to the L jack of the TV. The monaural sound will be heard from both speakers.
- For operation, refer to the instruction manual furnished with the VCR.
- Keep the VCR away from the TV, if the picture or sound is affected.
- When no signal is fed through the VIDEO INPUT jacks even though the TV is in the video mode, "VIDEO" indication will appear on the screen.
- If the equipment does not have a certain function, the corresponding button on Remote Commander is not effective.
- Only one VCR or video disc player can be connected to the TV at one time. Be sure not to connect a VCR with an S video output jack and a VCR not equipped with an S video output jack together.

2 Connecting a VCR/Video disc player not equipped with an S video output jack



Operating a Video Cassette Recorder

To turn on the power — Press POWER. To turn off the power, press again.
To start playback — Press ▶.
To stop function — Press ■.
To stop the tape momentarily — Press ❚❚. To release, press again.
To advance the tape rapidly — Press ▶▶.
To rewind the tape — Press ◀◀. To resume normal playback, press again.
To view the picture at a fast speed to find a particular scene — Keep pressing ▶▶ or ◀◀ during playback. To resume normal playback, release the button.
To select the channel — Press CH + (up) or – (down).
To record — Press ● simultaneously.

Operating a Video Disc Player

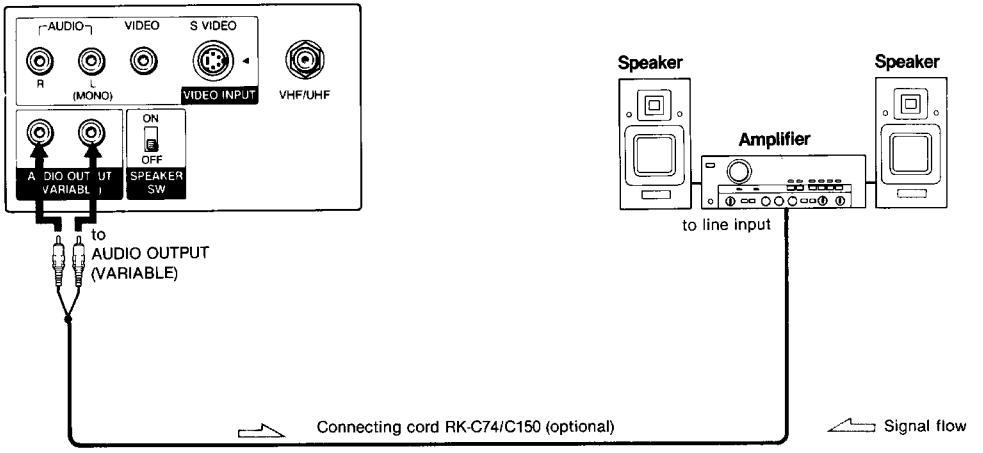
To turn on the power — Press POWER. To turn off the power, press again.
To start playback — Press ▶.
To stop function — Press ■.
To freeze a picture — Press ❚❚. To resume normal playback, press again.
*This function is effective only for CATV (standard-play disc). With CLV (extended-play disc), the unit will go into the standby mode if ❚❚ is pressed.
To view the picture at a fast speed to find a particular scene — Keep pressing ▶▶ or ◀◀ during playback. To resume normal playback, release the button.

About S video input

Video input and output signals can be separated into Y (luminance or brightness) and C (chroma or color) signals. Usually, these two signals are combined in a VCR and sent as one signal to a TV. Separation of the Y and C signals prevents them from interfering with one another, thereby improving picture (especially in color) quality.
This unit is equipped with an S video input jack through which these separated signal can be input directly.

Connecting an Audio System

—To monitor the TV or connected VCR sound through an audio system



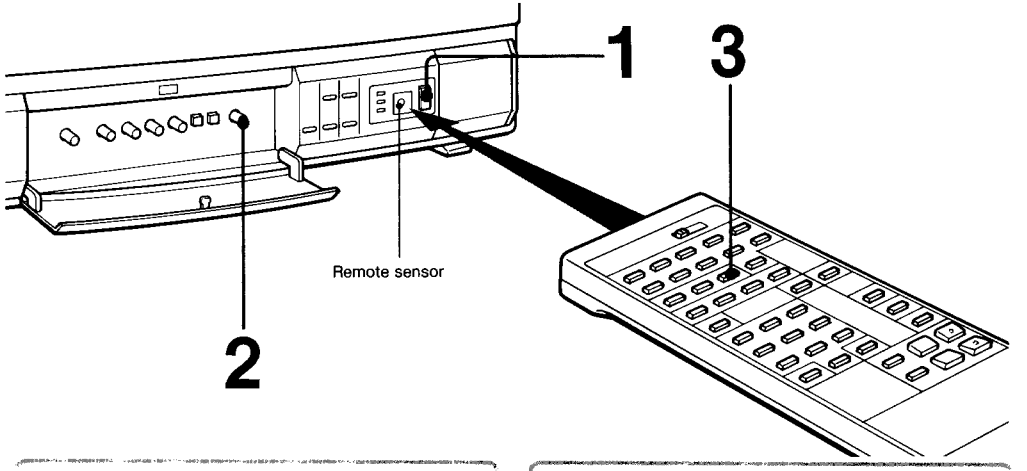
To adjust the sound level

Leave the amplifier volume, bass and treble controls to their mid positions and adjust the level with the VOLUME buttons on the TV or the VOL buttons on the Commander.

When an audio system is connected to AUDIO OUTPUT, be sure to set the SPEAKER SW (switch) on the rear of the TV to OFF.
The sound from the TV's speakers will be cut off.

Presetting TV Channels

To preset all receivable channels automatically



1 **Turn the TV on.**

POWER

2 **Set CABLE to the correct position.**

To preset cable TV channels ON OFF To preset VHF or UHF channels

CABLE

3 **Press AUTO PGM.**

AUTO PGM

"AUTO PROGRAM" is displayed on the screen and receivable channels (other than the channels already preset) will be preset in numerical sequence. The channels previously preset remain in the unit's memory.
When no more channels can be found, the programming stops and the lowest numbered channel is displayed.

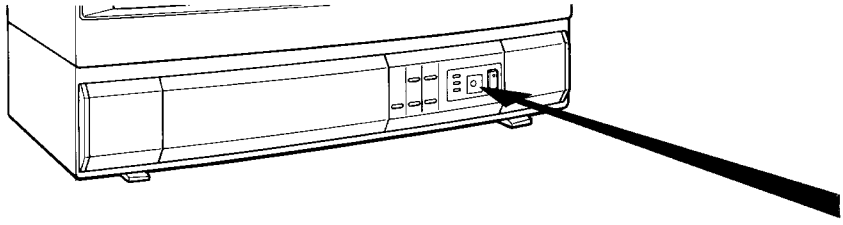
Receivable channels of this TV are:
VHF: 2-13
UHF: 14-69
Cable: 1-125

To check preset channels
Press CHANNEL +/–.

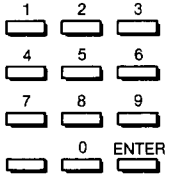
If the "VIDEO" indication is displayed on the screen
Press the TV/VIDEO button on the TV or on the commander so that a channel number appears.

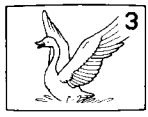
To add the channels that could not be preset with this automatic programming because their signal strength was too weak, or **to erase unnecessary channels,** follow the steps in "To preset only the desired channels or to erase unnecessary channels" on the next page.

To preset only the desired channels or to erase unnecessary channels
—manual programming

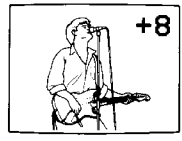


1 **Press the channel number button(s) and then ENTER to select the channel to be added.**





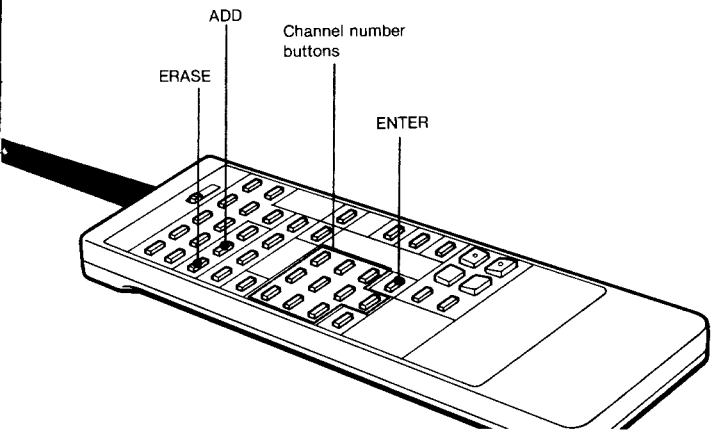
2 **To add channels — Press ADD.**



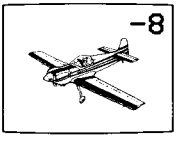
A "+" appears for a moment.
This channel has now been added to the channel scan memory.

When a VHF or UHF channel is erased
The cable TV channel with the same number is also erased and vice versa.

Pay cable TV systems use scrambled or encoded signals and require special converters (decorders) in addition to the normal cable connection.



To erase channel — Press ERASE



A "–" appears for a moment.
This channel has now been erased from the channel scan memory. The next time the CH+/– button is pressed, this channel will be skipped.

To add or erase other channels
Repeat steps 1 to 2.

Cable TV channel chart *
Cable TV systems use letters or numbers to designate channels. To tune in a channel, refer to the chart below.

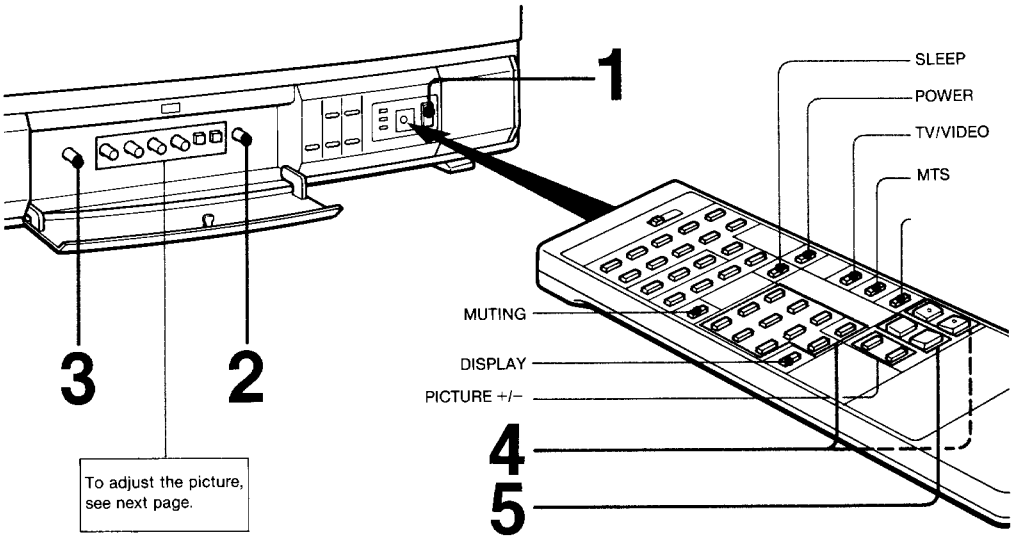
Number on this TV	1	5	6	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Corresponding CATV channel	A–8	A–7	A–6	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q

31	32	33	34	35	36	37	38	39	....	93	94	95	96	97	98	99	100	101	102	....	123	124	125
R	S	T	U	V	W	W+1	W+2	W+3	....	W+57	W+58	A–5	A–4	A–3	A–2	A–1	W+59	W+60	W+61	....	W+82	W+83	W+84

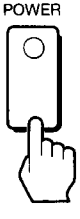
Check with your local cable TV company for more complete information on the available channels.

* The designation of the cable TV channels conforms to the EIA/NCTA recommendation.

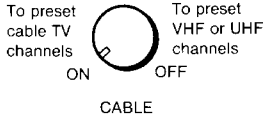
Watching TV Programs



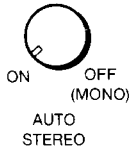
1 **Press POWER to turn the TV on.**



2 **Set CABLE to the appropriate position.**



3 **Set AUTO STEREO to ON.**



To turn off the system
Press POWER again.

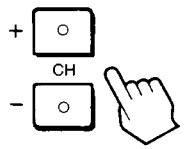
If the indication "VIDEO" is displayed on the screen
Press the TV/VIDEO button on the TV or on the commander so that a channel number appears.

To adjust the picture

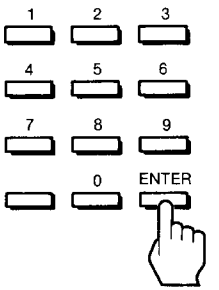
SHARPNESS	BRIGHT	COLOR	HUE	PICTURE
for less sharpness / for more sharpness	for less brightness / for more brightness	for less color intensity / for more color intensity	skin tones become purplish / skin tones become greenish	Press – to decrease picture contrast with soft color / Press + to increase picture with vivid contrast color

4 Select a channel in one of the following two ways:

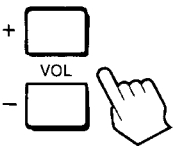
To scan the preset channels in numerical sequence, press CH +/–.



To select a channel directly, press the channel number button(s) and then ENTER. For example, to select channel 10, press 1, 0 and ENTER.



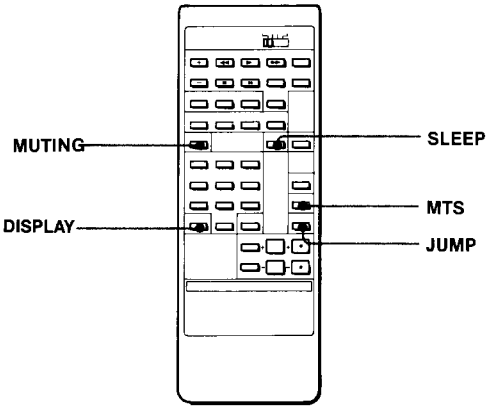
5 Press VOL + or – to adjust the volume.



If noise makes it hard to receive a very weak TV stereo program
Set AUTO STEREO on the TV to OFF so that the STEREO lamp goes off.
The stereo effect will be cancelled, but reception will be stabilized and the noise will be reduced.

For MUTING, DISPLAY, SLEEP, MTS and JUMP buttons, see the next page.

Enjoying Convenient Features



To receive a Multichannel TV Sound program

Each time MTS is pressed, MAIN, SAP (Second Audio Program), or both are selected in sequence. The corresponding indication will appear on the screen for a while.

To mute the sound

Press MUTING. The "MUTING" indication will appear on the screen. To restore the sound, press MUTING again or VOL +/–.

To keep the channel displayed on the screen

Press DISPLAY. To make the channel display disappear, press DISPLAY again.

To have the TV turn off automatically after about 1 hour

Press SLEEP. The "SLEEP" indication will appear on the screen for a few seconds and the SLEEP lamp on the TV will remain lit until the TV is turned off.

To cancel the SLEEP timer, press SLEEP again so that the SLEEP lamp goes out, or turn off the TV.

To switch quickly between 2 channels

Press JUMP. Each time JUMP is pressed, the channel which appeared on the screen directly before is recalled. This button enables you to keep track of two programs alternately.

Timer/Block

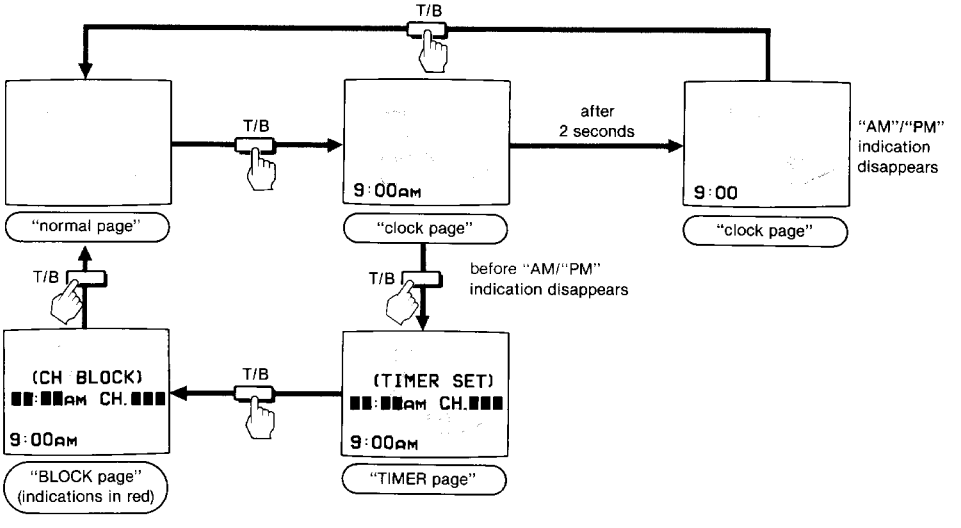
Available functions

Internal clock	Once the internal clock is set, the current time will appear on the screen. It is necessary to set the clock correctly to activate the program start TIMER and channel BLOCK.
Program start TIMER	Makes a program of your choice appear on the screen automatically at the desired time.
Channel BLOCK	Blocks a channel from appearing on the screen for 12 hours. Use channel BLOCK to prevent children from watching undesirable programs.

The buttons used for the above functions are located on the Remote Commander.

To set the internal clock, program start TIMER and channel BLOCK, you must summon the corresponding "pages": "clock page," "TIMER page" and "BLOCK page."

To change the "pages," press TIMER/BLOCK.
T/B stands for the TIMER/BLOCK button.

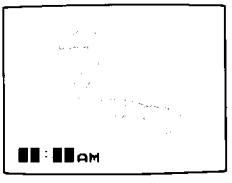


- All settings will be erased from the unit's memory if the unit is unplugged, or if a power failure occurs.
- The TIMER and BLOCK will operate only if the clock is set correctly.
- If the TIMER and BLOCK are set for overlapping times on the same channel, the blocked channel will appear on the screen at the time set on the TIMER.

How to Set the Internal Clock

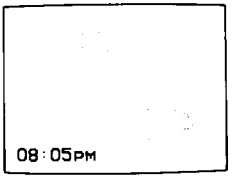
Example: To set the clock to 8:05 PM

1 Press TIMER/BLOCK once to change from "normal page" to "clock page."

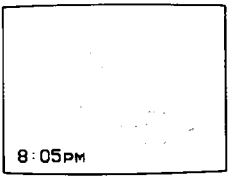


"clock page"

2 Press 0, 8, 0, 5, AM/PM (0 necessary).



3 If you have performed the operation correctly, press ENTER.
The numbers will "wink" to indicate that the clock has been set. (The 0 in front will disappear.)



If you have made a mistake, press CLEAR and return to step 2.

The "AM/PM" indication will disappear after 2 seconds.

To summon "TIMER page," press TIMER/BLOCK before the "AM"/"PM" indication disappears.
To return to "normal page," press TIMER/BLOCK after the "AM"/"PM" indication has disappeared.

To reset the clock, summon "clock page" and press CLEAR before the "AM"/"PM" indication disappears. Then follow the steps above from step 2.

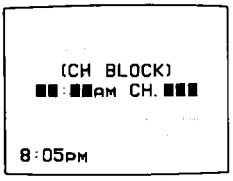
12:00 AM stands for midnight.
12:00 PM stands for noon.

How to Set the Channel BLOCK

Make sure that the clock has been set correctly before setting the channel BLOCK.

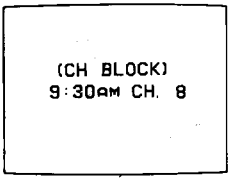
Example: To set the BLOCK for a program which begins at 9:30 AM on channel 8

1 Press TIMER/BLOCK three times to change from "normal page" to "BLOCK page."



"BLOCK page"
(indications in red)

2 Press 0, 9, 3, 0, ENTER (0 necessary).
Numbers will "wink" to indicate that the time has been set.
Press 8, ENTER (0 not necessary).
Numbers will "wink" to indicate that the channel has been set.



The BLOCK has now been set.
If you have made a mistake, press CLEAR and return to step 2.

At the preset time, the picture of the selected channel will be blocked from view and the sound will be muted. A red "BLOCKED" indication will appear on the screen while the channel is blocked.
Normal reception will be resumed after 12 hours.

To return to normal reception while the channel is blocked, recall "BLOCK page" and press CLEAR.

The BLOCK setting blocks a specified channel for the same 12-hour period everyday.

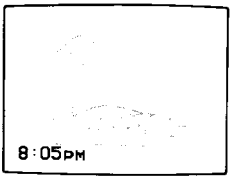
To clear BLOCK setting, summon "BLOCK page" and press CLEAR.
To reset, clear the setting and follow the steps above from step 2.

How to Set the Program Start TIMER

Make sure that the clock has been set correctly before setting the program start TIMER.

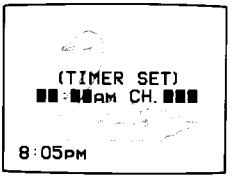
Example: To set the TIMER for a program which begins at 10:30 PM on channel 12

1 Press TIMER/BLOCK once to change from "normal page" to "clock page."



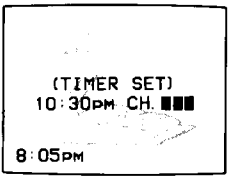
"clock page"

2 Press TIMER/BLOCK before the "AM"/"PM" indication disappears and summon "TIMER page."

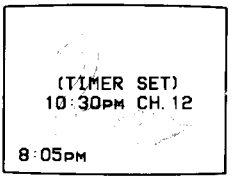


"TIMER page"

3 Press 1, 0, 3, 0, AM/PM, ENTER.
Numbers will "wink" to indicate that the time has been set.



4 Press 1, 2, ENTER (0 not necessary).
Numbers will "wink" to indicate that the channel has been set.



The TIMER lamp will light up to indicate that the TIMER has been set.
If you have made a mistake, press CLEAR and return to step 3.

At the preset time, the selected channel will appear on the screen and the TIMER lamp will go out. The TIMER will operate whether you are watching a TV program or a VCR playback, or even if you have turned off the TV.

If no button is pressed within 2 hours after the preset time, an "OFF" indication will appear on the screen for 1 minute. If a button is still not touched during the 1 minute, the TV will turn off automatically as a safety precaution.

The TIMER operates only once, but the time and the channel will remain in the unit's memory.
If you want to preset the same channel at the same time for a future date, press TIMER OFF/REPEAT. The TIMER lamp will light up to indicate that the TIMER has been reactivated.

If you want to deactivate the TIMER, press TIMER OFF/REPEAT again so that the TIMER lamp goes out .
It is not necessary to summon "TIMER page" to use the TIMER OFF/REPEAT button. Furthermore, this button is effective even if the TV has been turned off.

To clear the TIMER setting, summon "TIMER page" and press CLEAR.
To reset, clear the setting and follow the steps from step 3.